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Chouinard et al.

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[54] **FUEL CELL STAND-BY ENERGY SUPPLY SYSTEM**

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[52] **U.S. Cl.** 320/110; 320/107

[58] **Field of Search** 320/110, 107,
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66

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[57] **ABSTRACT**

A fuel cell stand-by energy supply system is provided for supplying electrical power to a device operated by power from an electrical utility in the event of a power failure. The system is comprised of a microcontroller which is connected to a detector capable of detecting power failure. The microcontroller monitors this detector and one or more conditions of the device to which electrical power is fed. The microcontroller operates a fuel cell switch to connect the fuel cell d.c. supply directly to the d.c. device or to a voltage conditioning circuit to produce an operative a.c. supply which is connected to the device to continue operation thereof during the power failure. The microcontroller monitors and manages the load in relation to the fuel cell power. The microcontroller also performs an autodiagnostic of the fuel cell.

16 Claims, 4 Drawing Sheets

